

# PFEIFER Socket Dowel with crimped end

Item-No. 05.250

We recommend Socket Dowels only for fixings, for which a general technical approval is not necessary.



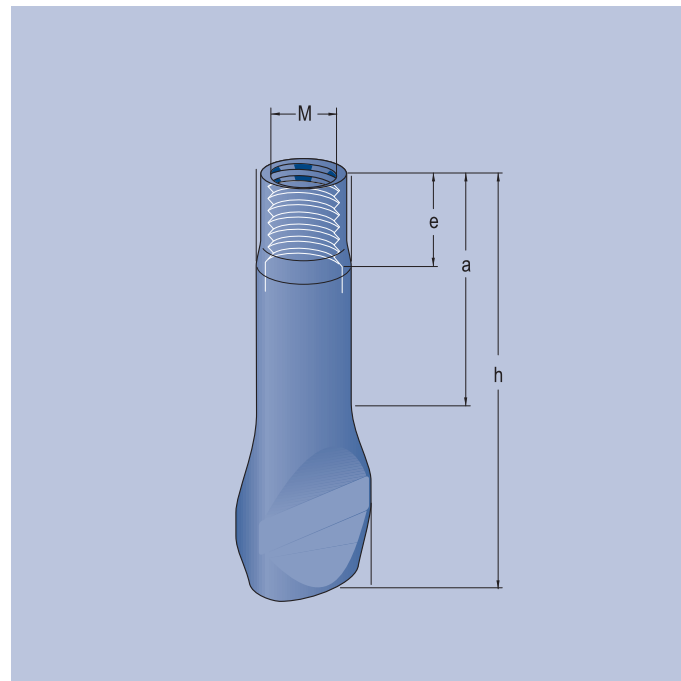
**PFEIFER**

Fixing System  
Socket Dowels

Fixing Sockets with crimped end give proof of excellent loading capacities in the most varied fields of application. The crimped end of the Socket Dowel transfers the force into the concrete by form closure. The load bearing capacity specified is calculated with a safety factor of  $\gamma \geq 5$  and for concrete strength of 25 N/mm<sup>2</sup>.

Material:

M 10 – M 12  
DIN 2394, St 34-2 NBK  
M 16 – M 24  
DIN 1626, St 33/37-2  
Stainless steel 1.4571



Minimal tolerances from the dimension specifications are possible. They will not influence the load capacity.

Ref. No. black/plain	Ref. No. zinc-plated	Ref. No. stainless steel	Load capacity t	adm. F kN	Size M x h	Dimensions mm		Packing unit pieces	Weight approx. kg/packing unit
						a	e		
–		<b>05.250.064.040</b>	0,15	1,5	6 x 40	25	6	200	1,6
–	<b>05.250.103.050</b>	–	0,32	3,2	10 x 50	25	10	500	10,0
–	<b>05.250.103.060</b>	–	0,40	4,0	10 x 60	30	10	500	12,5
–	<b>05.250.123.050</b>	–	0,40	4,0	12 x 50	30	12	400	14,4
–	<b>05.250.123.070</b>	–	0,60	6,0	12 x 70	40	12	400	21,2
<b>05.250.162.100</b>	<b>05.250.163.100</b>	–	1,00	10,0	16 x 100	50	16	100	11,5
<b>05.250.202.100</b>	<b>05.250.203.100</b>	–	1,25	12,5	20 x 100	50	20	100	15,1
<b>05.250.242.100</b>	<b>05.250.243.100</b>	–	1,60	16,0	24 x 100	40	24	50	13,5

Sample order:

200 PFEIFER Socket Dowels with crimped end, plain, M 16 x 100 mm:  
200 PFEIFER Socket Dowels ref. no. 05.250.162.100

# Installation instructions for PFEIFER Socket Dowels with crimped end

## 1. Installation

The Socket Dowel can be fixed to the formwork with the PFEIFER Nail Disc or it can be screwed through the formwork with a hexagonal screw. Forces are transferred by form closure. No further reinforcement is necessary. The crimped end can differ from the shape shown overleaf without the load capacity being affected.

## 2. Straight pull

In order to avoid premature failure of the Socket Dowel caused by blow-out of the concrete under straight pull, a certain minimum edge distance has to be considered. Table 1 and Figure 1 show the minimum values for concrete with a compressive strength of 25 N/mm<sup>2</sup>.

**Table 1 – Edge distance under straight pull**

Size mm x mm	adm. F <sub>Z</sub> kN	min a <sub>r</sub> (Z) mm
M 6 x 40	1,5	60
M 10 x 50	3,2	75
M 10 x 60	4,0	90
M 12 x 50	4,0	75
M 12 x 70	6,0	105
M 16 x 100	10,0	150
M 20 x 100	12,5	150
M 24 x 100	16,0	150

## 3. Transversal pull loads

If there is exposure to transversal pull (vertically to the longitudinal axis of the Socket Dowel) in the direction of the free edge, there is danger of concrete blow-out. To make sure the forces are transferred properly, certain minimum edge distances (a<sub>r</sub>) and minimum thickness of panel d should be considered. See Table 2 and Figure 2. Greater concrete cover may result in thicker precast concrete panels.

**Table 2 – Edge distance, thickness of panel under transversal pull**

Size mm x mm	adm. F <sub>Q</sub> kN	min a <sub>r</sub> (Q) mm	min d mm
M 6 x 40	1,5	80	65
M 10 x 50	3,2	90	70
M 10 x 60	4,0	120	85
M 12 x 50	4,0	100	75
M 12 x 70	6,0	140	95
M 16 x 100	10,0	200	125
M 20 x 100	12,5	200	125
M 24 x 100	16,0	200	125

## 4. Parallel shear pull (interaction)

We speak of parallel shear pull if there is straight pull and transversal pull simultaneously working on the Socket Dowel. The force components should fulfil the following formula:

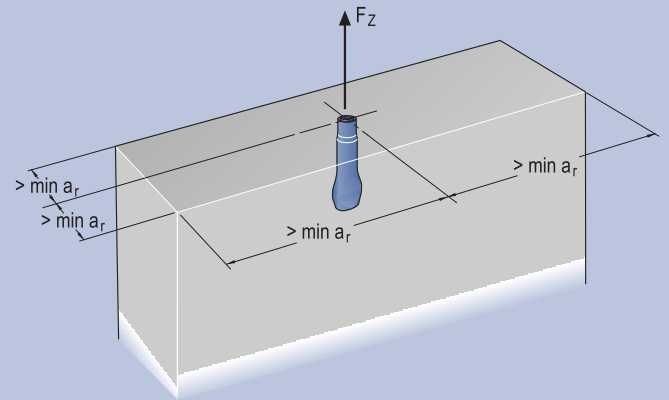
$$\sqrt{F_Z^2 + F_Q^2} \leq \text{adm. } F$$

This means, simply explained, for an angle of inclination from 0° to 90° the same admissible force is valid.

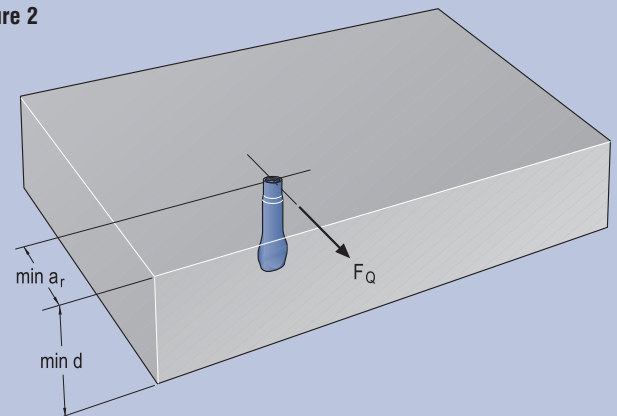
## 5. Example of application

In Figure 3 a typical example for the proper use of PFEIFER Fixing Sockets is shown: Attachment of an installation bracket.

**Figure 1**



**Figure 2**



**Figure 3**

